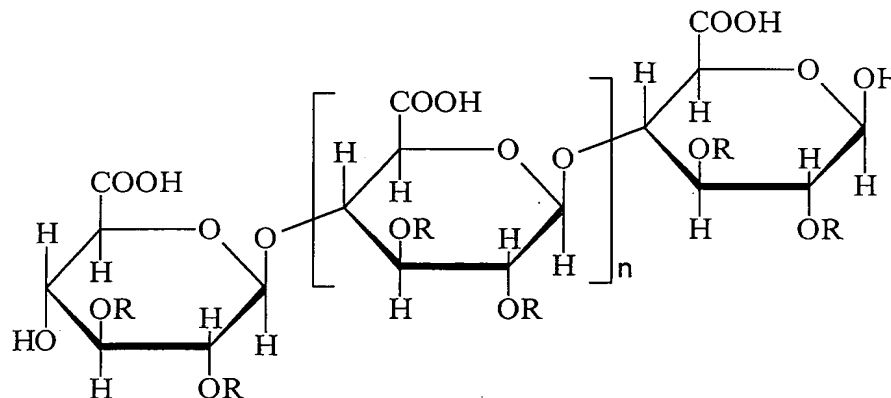


CLAIMS

1. Use of compounds chosen from:

- the following 1,4 β -D-glucuronan polymers of formula (I):



in which n is an integer between approximately 300 and approximately 2500, and R represents H or $COCH_3$.

- and/or the $\beta(1-4)$ chain glycuronic oligosaccharides derived from polymers of formula (I), and of which the number of saccharidic units is less than approximately 30,

- and/or the esters and/or ethers corresponding to polymers of formula (I) or to the above mentioned oligosaccharidic derivatives,

- * as phytosanitary products within the framework of uses linked to their activity of amplifying the enzyme 1,3 β -D-glucanase,
- * and/or as biofertilizers within the framework of uses linked to their activity of amplifying the enzyme 1,3 β -D-glucanase, and/or the enzyme 1,4 β -D-glucanase, and/or xyloglucan endotransglycolase.

2. Use according to claim 1, of the compounds chosen from those mentioned in claim 1, as phytosanitary products within the framework of uses linked to their activity of amplifying the enzyme 1,3 β -D-glucanase, such as the protection of plants against pathogens, notably against bacteria, viruses, fungi, or the adaptation of the plants to an abiotic stress, in particular adaptation to cold, or to raised ozone levels.

Sub
Q1

3. Use according to claim 1 or 2 of 1,4 β -D-glucuronan polymers of formula (I) in which n is an integer between approximately 300 and approximately 2500, and R represents H.

5 4. Use according to claim 1 or 2 of 1,4 β -D-glucuronan polymers of formula (I) in which n is an integer between approximately 300 and approximately 2500, and R represents H or COCH₃, the weight percentage of COCH₃ preferably being between 0 and 30.5.

10 5. Use according to claim 1 or 2 of β (1-4) chain glycuronic oligosaccharides, such as the oligo 1,4 β -D-glucuronans, the oligo 1,4 β -D-mannuronans, and the oligo 1,4 β -D-guluronans, whose DP is less than 30, and preferably between 2 and 15.

15 6. Use according to claim 5 of glycuronic oligosaccharides chosen from the following:

- the oligo 1,4 β -D-glucuronans of DP8, and of average DP 8
- the oligo 1,4 β -D-mannuronan of DP4,
- the oligo 1,4 β -D-guluronan of DP4.

20 7. Use according to claim 1 of the compounds chosen from those mentioned in claim 1, as biofertilizers within the framework of uses linked to their activity of amplifying the enzyme 1,3 β -D-glucanase, and/or the enzyme 1,4 β -D-glucanase, and/or xyloglucan endotransglycolase.

25 8. Use according to claim 7 of the compounds chosen from those mentioned in claim 1, as biofertilizers within the framework of control of one or more stages of plant development, such as the control of fruit maturation, abscission, growth of the pistil or maturation of the anthers, and/or control of the organization of cell walls during expansion of the tissues, and/or to reinforce the plant cell walls and adapt them to
30 environmental stimuli.

Sub
Q2

9. Use according to claim 7 or 8, of oligo 1,4 β -D-glucuronans, whose DP is below approximately 30, and preferably between 2 and 15, as biofertilizers within the

framework of uses linked to their activity of amplifying the enzyme 1,3 β -D-glucanase, and the enzyme 1,4 β -D-glucanase, within the framework of control of one or more stages of plant development, such as the control of fruit maturation, abscission, growth of the pistil or maturation of the anthers.

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10. Use according to claim 9, of the oligo 1,4 β -D-glucuronan of average DP 8.

Sub
A3

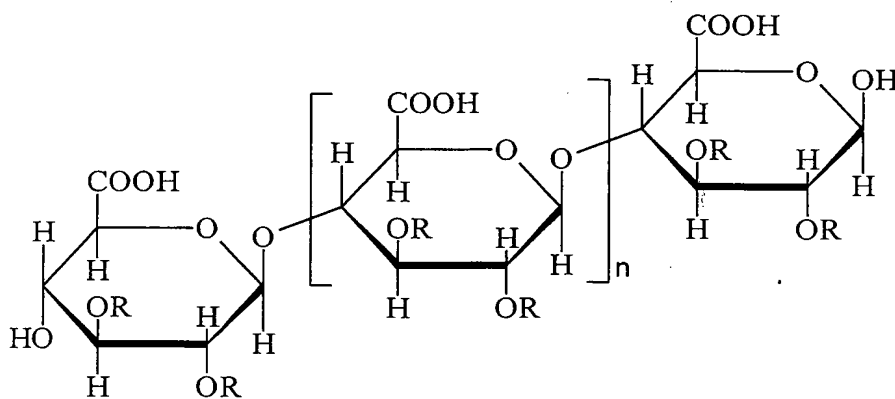
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11. Use according to claim 7 or 8, of oligo 1,4 β -D-mannuronans, whose DP is below approximately 30, and preferably between 2 and 15, as biofertilizers within the framework of uses linked to their activity of amplifying the enzyme xyloglucan endotransglycolase within the framework of the control of organization of cell walls during expansion of the tissues and/or to reinforce the plant cell walls and adapt them to environmental stimuli.

12. Use according to claim 11, of the oligo 1,4 β -D-mannuronan of DP 4.

13. Phytosanitary products and/or biofertilizers characterized in that they include at least one compound chosen from:

- the following 1,4 β -D-glucuronan polymers of formula (I):



25

in which n is an integer between approximately 300 and approximately 2500, and

30

R represents H or COCH₃,

- and/or the β (1-4) chain glycuronic oligosaccharides derived from polymers of formula (I), and of which the number of saccharidic units is less than approximately 30,

– and/or the esters and/or ethers corresponding to the polymers of formula (I) or to the above mentioned glycuronic oligosaccharidic derivatives.

14. Phytosanitary products according to claim 13, characterized in that they include at least one 1,4 β -D-glucuronan polymer of formula (I) in which n is an integer between approximately 300 and approximately 2500, and R represents H.

15. Phytosanitary products according to claim 13, characterized in that they include at least one β (1-4) chain glycuronan oligosaccharide, such as the oligo 1,4 β -D-glucuronans, the oligo 1,4 β -D-mannuronans, and the oligo 1,4 β -D-guluronans, whose DP is less than 20, and preferably between 5 and 15.

16. Phytosanitary products according to claim 15, characterized in that they include at least one glycuronic oligosaccharide chosen from the following:

- the oligo 1,4 β -D-glucuronans of DP8, and of average DP 8
- the oligo 1,4 β -D-mannuronan of DP4,
- the oligo 1,4 β -D-guluronan of DP4.

17. Biofertilizers according to claim 13, characterized in that they include at least at least one oligo 1,4 β -D-glucuronan, whose DP is less than approximately 30, and preferably between 2 and 15 such as the oligo 1,4 β -D-glucuronan of average DP 8.

18. Biofertilizers according to claim 11, characterized in that they include at least at least one oligo 1,4 β -D-mannuronan, whose DP is less than approximately 30, and preferably between 2 and 15, such as the oligo 1,4 β -D-mannuronan of DP 4.